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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,786	01/11/2006	Mike Muhl	WEM-081US	4903
26339 7590 02/02/2010 MUIRHEAD AND SATURNELLI, LLC 200 FRIBERG PARKWAY, SUITE 1001 WESTBOROUGH, MA 01581				
EXAMINER				
BUI, HUNG S				
ART UNIT		PAPER NUMBER		
2841				
MAIL DATE		DELIVERY MODE		
02/02/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/539,786

**Applicant(s)**

MUHL ET AL.

**Examiner**

HUNG S. BUI

**Art Unit**

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7, 10-14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 2,3,8,9,15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 06/17/2005 and 11/27/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in 10259746-4-24 on 12/19/2002.

***Oath/Declaration***

2. The oath/declaration filed on 01/11/2006 is acceptable.

***Election/Restrictions***

3. Applicant's election without traverse of the restriction in the reply filed on 11/06/2009 is acknowledged. However, the restriction mailed on 10/02/2009 was improper. The withdrawn claims 7-13 are rejoined with the apparatus claims of the application. All claims are examined on merit.

***Information Disclosure Statement***

4. The IDS filed on 06/17/2005 and 11/27/2009 have been considered and made of record.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4-7, 10-14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. [US 4,984,927] in view of Shibamoto et al. [US 6,621,160].

**Regarding claims 1, 6-7, 12-13 and 19-20,** Kojima et al. disclose an apparatus to joint between a first metal component (12, figure 4, column 4 line 8) and a second component (11a, figure 4, column 4, lines 23-24) made of ceramic which is exposable to the temperature effect of an external medium (34, figure 4), including a first bond/adhesive (3, figure 4) between the second ceramic component and the first metal component and a second bond/adhesive (5, figure 4).

Kojima et al. disclose the instant claimed invention except for the second bond/adhesive having a greater elasticity than the first bond/adhesive.

Shibamoto et al. disclose an electronic module (figure 3) having a first bond/adhesive (5, figure 3) and a second bond/adhesive (6, figure 3), wherein the second bond/adhesive has a greater than elasticity (Thermal expansion Coefficient) than the first bond/adhesive (column 4, line 65 – column 5, line 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a various elasticity of each bond/adhesive in the apparatus of Kojima et al., as suggested by Shibamoto et al., for the purpose of providing specific area of mounting portion and heat dissipation in the apparatus device.

**Regarding claims 4 and 10,** Kojima et al., as modified, disclose the second bond/adhesive having an exterior contact side (a contact side to contact the external medium 34, figure 4), provided for contact with the external medium, and an inner side,

facing away from the contact side but facing and shielding the first bond (a side to contact the first bond/adhesive 3, figure 4).

**Regarding claims 5 and 11**, Kojima et al., as modified, disclose at least one area of the inner side of the second bond being directly contacted with the first bond (figure 4).

**Regarding claims 14 and 19**, the claimed method step would have been necessitated by the product structure of claims 1 and/or 7.

**Regarding claim 17**, the claimed method step would have been necessitated by the product structure of claims 4 and/or 10.

**Regarding claim 18**, the claimed method step would have been necessitated by the product structure of claims 5 and/or 11.

#### ***Allowable Subject Matter***

7. Claims 2-3, 8-9 and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Taniguchi et al. [US 6,794,614] disclose ceramic heater with lead wire connection having brazing material.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinhee J. Lee can be reached on 571-272-1977. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hung S. Bui/  
Primary Examiner, Art Unit 2841  
01/31/2010